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ABSTRACT

Research was conducted to show how segments of the population of minority and disadvantaged youth might be positively influenced by selective information campaigns to participate in vocational education programs. The first-year effort (stage 1) undertook to measure student attitudes and to develop recommendations for using this information in communicating with youth regarding vocational education. The sample studied included students from six San Francisco Bay Area school districts located in low income areas with high minority populations. Q-methodology was used to group subjects into clusters or segments of students who had reacted similarly to 48 attitude statements. Of two distinct segments, the largest (type 1) reported agreement with positive attitude statements. Type 2 students, comprising one-third of the sample, were more negative. It was concluded (1) that messages for type 2 students needed to inform them of the positive aspects of vocational education programs and to be channeled through more credible and respected sources and (2) that those for type 1 students should focus on delivery information, explaining where and how to become involved in vocational education programs. Stage 2 of the study involved developing and testing prototype information campaigns (slide tapes) aimed at each type. The messages were presented in seven classrooms in San Francisco. Before the presentation students were asked to respond to a 10-item battery to classify them as type 1 or type 2 and then to complete a pretest. They then received (on a random basis) one of the messages and a posttest. The results indicated again the existence of the two types of students. However, with regard to immediate commitment (intent to take vocational education courses now) results were independent of treatments. (Author/LAS)

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TARGETING INFORMATION TO MARKET SEGMENTS: AN ACTION ORIENTED STUDY OF ATTITUDES TOWARD VOCATIONAL EDUCATION AMONG TARGET POPULATIONS

Final Report
February, 1976

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ABSTRACT

The reported research was conducted to show how segments of the population of minority and disadvantaged youth might be positively influenced by selective information campaigns to participate in vocational education programs. The more general objective was to provide those responsible for the operation of vocational education programs with information about why current programs are attractive or unattractive to disadvantaged and minority students and about how to more effectively communicate with them regarding these programs.

The first-year (Stage 1) effort undertook to measure student attitudes and to develop recommendations for using this information in communicating with youth regarding vocational education. The sample studied included students from six San Francisco Bay Area school districts located in low income areas with high minority populations. Q-methodology was used to group subjects into clusters or "segments" of students who had reacted similarly to 48 attitude statements.

Most of the students studied felt quite positive about vocational education. Of two distinct segments, the largest ("Type 1") reported agreement with positive attitude statements. They felt that taking vocational education would be enjoyable and could lead to better jobs. These students reported that they were encouraged by respected others to take vocational training. Type 2 students were more negative; however, they comprised only one-third of the sample. This group felt that vocational education would not train them for a desirable job, that courses would be boring, poorly taught, and difficult and that taking vocational education could be a hindrance to getting into college. Type 2 students reported that they were encouraged to go to college by their parents and people they respect but that they were not encouraged to participate in vocational education programs.

It was concluded that messages for Type 2 students needed to inform them of the positive aspects of vocational education programs and to be channeled through one or more credible and respected sources; for Type 1 students, it would not be necessary that a message "sell" the merits of vocational education; rather, it would have to provide "delivery' information, explaining where and how to become involved in vocational education programs.

Stage 2 of the study involved developing and testing prototype information campaigns (slide tapes) aimed at either type. The messages were presented in seven classrooms of San Francisco high school students. Before the presentation, students were asked to respond to a 10-item battery to classify them as Type 1 or Type 2 and then to complete a pretest or Before-Measure. They then received (on a random basis) one of the messages and a posttest, or After-Measure.

The posttest measured impact of the treatments. This included a measure of opinion regarding the worth of taking vocational education, two measures of intent to participate in vocational education, and a measure of change in interest in vocational education after hearing the message.

Abstract, continued

It was hypothesized that students receiving the appeal targeted to their particular type would respond more favorably than students receiving the message targeted to the other type.

The results of the Stage 2 study indicated again the existence of the two types of students described in Stage 1. Treatments targeted to the two types of students produced logical but in some cases unanticipated results. Type 1 students changed more on all measures, regardless of the treatment. The hypothesized interaction was observed only very slightly and only for the measures of intent. While results are confusing, it appears that the messages may operate as predicted if we are concerned with more general commitments (after-high school intent), but with the more immediate commitment (intent to take vocational education courses now) results are independent of treatments. Somewhere in between is the more general interest measure and the attitude measure, which show the predicted effect but are unstable.

A certain logic can be applied. It was not expected that either message would show much impact, since both were prototypical and not solidly backed up by the reality of available offerings, and it may be that students felt persuaded in theory, but they were not impelled to take immediate action. In fact, group discussions always brought up the same points: students were stimulated by the information about vocational alternatives, but they didn't feel that programs leading to these alternatives were really immediately available to them. It was concluded that the two types of students found by this study do represent important population segments, but that to reach either segment to increase participation in existing programs, one has to start with improved and believable access to courses and programs that lead to jobs.

INTRODUCTION

The reported research was conducted to show how segments of the population of minority and disadvantaged youth might be positively influenced by selective information campaigns to participate in vocational education programs. The more general objective was to provide those responsible for the operation of vocational education programs with information about why current programs are attractive or unattractive to disadvantaged and minority students and how to more effectively communicate with them regarding these programs.

In order to identify target groups and develop and test information campaigns that might reach each group, the following specific tasks were outlined: (1) Define operationally the terms minority and disadvantaged youth; (2) Develop a method of selecting a sample to meet the definition of task 1; (3) Develop the instrumentation necessary to define attitudes toward vocational education relative to more fundamental beliefs about work; (4) Administer preliminary tests to refine instruments; (5) Collect and analyze preliminary data and modify instruments if necessary; (6) Administer the final instruments on the test populations identified in tasks 1 and 2; (7) Collect and analyze attitude data using appropriate statistical techniques; (8) Issue a preliminary report identifying major population segments and recommending communication strategies; (9) Develop information campaigns to be tested for effectiveness in changing attitudes of target subjects toward vocational education; (10) Devise a test plan for administering treatments to target and control segments and evaluate outcomes using various attitude tests; (11) Administer information campaigns devised in Task 9

to a sample of subjects according to the plan devised in Task 10;
(12) Evaluate outcomes of information campaigns according to the test plan and write a final report.

The first seven tasks, comprising Stage 1, were completed during the 1974-75 school year and the report (Task 8) submitted in August, 1975 (see Webb, Peter et al. "Targeting Information to Market Segments: An Action Oriented Study of Attitudes Toward Vocational Education Among Target Populations," Year End Report, Far West Laboratory for Educational Research and Development, August 1975.)

Tasks 9 through 12 comprised Stage 2 and were carried out during the fall and winter of 1975-76. This report presents results of Stage 2 Activities. It includes:

1) A discussion of the problem as it was perceived during Stage 2;
2) A review of historical data and other research relevant to project objectives ("The Research Context");
3) A description of the methodology used for Stage 2 data collection ("The Stage 2 Study");
4) A summary of results and discussion of their implications for increasing participation of minority and disadvantaged youth in vocational education ("Results" and "Discussion").

The Problem

The present study focused initially on why current vocational offerings were unattractive to minority and disadvantaged students. Thus, the research proposal stated:

> . . . despite the fact that there seems to be very broad agreement that there is a need for improved vocational programs to attract and hold minorities and the disadvantaged, there is very little specific information that tells us why current programs are unattractive (FWL-13.498-01, January 1974).

The first-year (Stage 1) effort undertook to provide that information and to develop recommendations for using it in communicating with youth regarding vocational education. The sample studied included students from six San Francisco Bay Area school districts located in low income areas with high minority populations. Q-methodology was used to group subjects into clusters or "segments" of students who had reacted similarly to 48 attitude statements.

Somewhat to the surprise of project staff, most of the students studied felt quite positive about vocational education.* Of two distinct segments, the largest ("Type 1") reported agreement with positive attitude statements. They felt that taking vocational education would be enjoyable and could lead to better jobs. These students reported that they were encouraged by respected others to take vocational training. Their main problem seemed to be that they did not know how to become involved in a vocational program.

Type 2 students were more negative; however, they comprised only one-third of the sample. This group felt that vocational education would not train them for a desirable job, that courses would be boring, poorly taught, and difficult and that taking vocational education could be a hindrance to getting into college. Type 2 students reported that they were encouraged to go to college by their parents and people they respect but that they were not encouraged to participate in vocational education programs.

*It should be noted that the study did not attempt to report frequency distributions, since it did not use a random sample. However, the difference found is quite large and therefore likely to be replicable.

It was concluded that messages for Type 2 students needed to inform them of the positive aspects of vocational education programs and to be channeled through one or more credible and respected sources; for Type 1 students, it would not be necessary that a message "sell" the merits of vocational education; rather, it would have to provide "delivery" information, explaining where and how to become involved in vocational education programs. Since Type 1 students were clearly in the majority and additionally were likely to comprise the less "resistant" of the two segments, it was concluded that delivery information regarding available programs would be most important in a general information campaign to increase vocational education participation among these students. However, where a campaign allowed targeting of different information to the two segments, a second message would stress the benefits possible through participation.

Up to this point in the study, it had been assumed by project staff that the problem of changing attitudes toward vocational education (thus increasing participation) lay not in changing the basic desires or needs of students but rather in providing them with better information about vocational education as an alternative for reaching their goals. Stage 1 results were intended to point up misconceptions or lack of information about vocational education held by different groups of students. In the case of Type 1 students, there was a lack of information about delivery. For Type 2 students, there were negative conceptions about the quality of offerings. The next step was to present ways this could be corrected through selective information campaigns. It was felt that this would ultimately improve attitudes and increase participation.

With this perspective, project staff began the Stage 2 effort--developing prototype information campaigns. However, in developing a

message containing delivery information, they found they could not find offerings consistent with the Type 1 students' high expectations or the merits to be described to Type 2 students. Certain high-quality programs exist, but they are not generally available, and those which are generally available do not span the diversity of occupational goals expressed by minority, low income students. Thus, it began to appear that increased participation in the current offerings may depend after all on decreasing students' desires and goals to make them more consistent with these offerings! A theme of the present study is that this is an unacceptable approach, that increasing participation begins with developing effective programs and allowing access to them. Information to promote programs is necessary, but it should be based on fact rather than puffery.

In light of this, the campaigns needed to increase participation would have to be more than informational; they would also have to include further program development to improve effectiveness and access of current offerings. Since this was beyond the scope of the current study, the focus of Stage 2 shifted from a direct test of full-fledged campaigns to a "market test" of ideas for campaigns. Students would be asked to observe the kind of campaign which could be mounted and then to discuss how they would react to it. It was expected that Type 1 students would be more favorable to "how to" ideas (delivery information) and Type 2 students to information about the merits of programs themselves. This hypothesis was tested in Stage 2. Additionally, both types of students provided us with information about how effectiveness and access of current offerings could be improved.

The remainder of this report describes the research context for both stages of the present study, the procedure and results of Stage 2, and a discussion of implications of both stages.

ATTITUDES OF MINORITY AND DISADVANTAGED YOUTH TOWARD VOCATIONAL EDUCATION: THE RESEARCH CONTEXT

Very little behavioral research has addressed the issue of attitudes of minority and disadvantaged youth toward vocational education--the question of why they do or do not participate. There is ongoing research related to this question (for example, work directed by Michael Black at the Center for Vocational Education, Ohio State University); but our own exhaustive library searches have not identified an established literature. Those studies which do report student attitudes are not generally drawn from vocational education programs but rather from Job Corps or similar job training programs; and they do not focus on the client's (student, trainee, employee, etc.) perceptions of the education or training program but rather on his/her career aspirations or attitudes toward work. For example, Lockette and Davenport's (1971) review of the research on in-school vocational education and out-of-school training programs focused on the results of these programs with the attitudes of interest being those concerning employment or occupational goals rather than perception of the program. Additionally, for many studies, the target audience is not necessarily those participants in vocational education which USOE, in implementing the Vocational Education Act of 1963 and its amendments of 1968, have defined as "disadvantaged." (See Federal Register: Volume 35, No. 91, Part II, Chapter I, Subpart A, Section 102.3.) For example, Magisos (1971) sees the target audiences in vocational-technical education as teachers, counselors, administrators, teacher educators, and other professionals.

The failure of researchers to deal with the perceptions held by the intended recipients of a planned educational program or service has sometimes caused them to misinterpret or misapply results of research. For example, Bird (1975) reports the research "discovery" made in the 50's and 60's that socio-economic status was a more important factor than intellect in determining who got to go to college. Believing money to be the major deterrent to obtaining higher education, congressmen and legislators initiated bills to pour funds into the state college systems, and increased benefits were offered to veterans to enter training programs. However, a large proportion of intended recipients still did not attend college or they soon dropped out, and relatively few veterans took advantage of the increased benefits. Trent and Medsker (1968), when they questioned directly the intended recipients, found that the education of parents and encouragement on their part was a more important factor than money in determining whether a high school graduate attended college.

Until very recently the approach to vocational education for minority and economically disadvantaged students has obtained in a like manner--involving increased funding to provide new or expanded programs without measuring the views of these students and their parents regarding vocational education. Basic attitudinal information is generally not available. For this study, we have relied for our further understanding on a historical view of minority/disadvantaged involvement and on a careful interpretation of research with indirect or partial relevance. The following section describes historical events that are likely to have shaped current attitudes; it is followed by a discussion of research findings which also bear on this question.

Attitudes of Minorities and Low Income People: A Historical Perspective

Until recent years, access to vocational education programs has been of a nature to discourage positive or constructive attitudes on the part of minority cultures. Vocational education came about as part of a broad, general movement toward specialization and differentiation which emerged in American education during the early part of the twentieth century (Tyack, 1974; Lazerson & Grubb, 1974).

> . . . students were raw materials to be processed in an efficiently run plant, and the criterion of success was the price the finished product could bring in the market place (Lazerson and Grubb, 1974, p. 50).

Educators such as Ellwood P. Cubberly of Stanford saw vocational and industrial training as a means to making low-status persons useful to society. Indeed, much of the early experimentation in skill training was done in reform schools and in institutions for Black and Indian youth (Tyack, 1974). Thus, the movement toward differentiation worked to the detriment of children who were in some way different from the mainstream white, middle to upper-middle class children, and vocational education was sometimes used as a tool in this movement.

This circumstance was reinforced in the association of vocational education and vocational guidance with the developing testing movement during the early part of this century. The following incident reported by Tyack illustrates this quite well:

> [The Superintendent] was bothered by the high rate of retardation of pupils and hired a tester from Stanford to give group intelligence tests to all children in the second through eighth grades. When the results were assembled in charts in colored inks, [he] discovered that "there was practically no retardation," that is, children were actually performing at their mental levels (or in other words, the fault lay not in the teachers but in the genes of the children). Half of the pupils were of Mexican background; for the most part these were the pupils who tested low, did poorly in school, and dropped out early. The obvious solution was to create a special vocational curriculum for Mexicans in their segregated classrooms, (pp. 210-211).

The history of vocational education for Black Americans illustrates this reasoning and the harm it has done, not just against minority youth but to the image and quality of vocational education itself. After Reconstruction and with the reassertion of white supremacy in the South, manual or industrial training became the special education provided for Blacks, offering schooling consistent with their second class citizenship. At that time, there was division on this issue within the Black community. Booker T. Washington was a proponent of the idea that Blacks had to begin at the bottom and work their way up the economic hierarchy. Further, he did not push for skills which were relevant to a rapidly industrializing economy. Rather, the important content for Blacks to be taught included honesty, persistence, thrift, and industriousness. Of course, Washington had vociferous critics. The most eloquent was William E.B. DuBois, who argued that Black education should not be different from white education and that when industrial education is appropriate, it should be directed toward those professional and technical skills needed to compete in an industrial economy (Lazerson and Grubb, 1974). DuBois has lost on both counts. Many observers believe that Blacks are overrepresented in vocational education yet underrepresented in the most effective programs. Some feel that the overall skill level of the Black community declined during 1860-1940. Former slaves and freedmen were skilled craftsmen who were thwarted by a racist economic system (management and craft unions) and/or made obsolete by industrialization. Hall's (1973) study of Black vocational and industrial education reveals that federal expenditures from the Smith-Hughes Act for public secondary programs in vocational education were completely inequitable. In those states with dual school systems there was not one which allocated an equitable amount for the Black schools.

In 1935, the Maryland population was 16.9% Black but only 2.6% of the federal money was so allocated. Mississippi's figures were 50.2% and 17.4%; South Carolina's were 45.6% and 9.5%. These figures are not surprising to anyone who has studied the expenditure patterns of states operating dual school systems. Harlan found the same situation when he investigated the state expenditures for Virginia, North Carolina, South Carolina, and Georgia (Harlan, 1969).

Thus, by 1960, the relationship of Blacks and other minorities with vocational education was understandably controversial. In 1961, President Kennedy appointed the Panel of Consultants on Vocational Education to make recommendations for improving and redirecting policy in this area. Their report served as the basis for the Vocational Education Act of 1963. Most of the report dealt with arguments leading to the recommendation for an expansion of the narrow focus on seven occupations developed under the Smith-Hughes legislation. However, the Panel went further, arguing forcefully for an emphasis upon human needs--the <u>people</u> involved and their need for skills (Lockette & Davenport, 1971).

The panel's report singled out a group of youth with "<u>special needs</u>."

> "These students are sometimes called potential drop-outs, disinterested, reluctant, disadvantaged, alienated, or culturally deprived. Other youth problems are recognized in connection with minorities. . . . Altogether the number represented in these classifications is very great; the 'dynamite' generated as a result may be social, political, and economic, especially in large population centers."* (Panel, 1963)

* The panel was echoing the concern expressed earlier by Conant in his <u>Slums and Suburbs</u> (1961) that from the great disparity between the level of education for the non-white slums and the white suburbs there accumulated "social dynamite" in the large cities of the United States.

Thus, the VEA of 1963 included a "provision encouraging the expenditure of funds for students with special needs or others 'who have academic, socioeconomic, or other handicaps that prevent them from succeeding in the regular vocational education program,'" (Lockette and Davenport, 1973, p. 6.). This expenditure was not mandatory and less than three percent of the VEA 1963 money was channeled to such programs. However, the events of the years which followed (the civil rights movement and the poverty programs) created a situation where by the late 1960's the needs of minorities and low-income people could not be ignored or treated nominally (Lockette and Davenport, 1973). Thus, in 1968, Congress sought to require states to follow its 1963 recommendation more closely. It was mandated that 15% of federal vocational education money be spent on programs for economically, socially, and other disadvantaged persons. As Lockette and Davenport (1973) point out, Congressional goals were to enroll disadvantaged students in regular programs--modified as needed--rather than establishing a separate system (p. 7).

1968 legislation cannot be viewed in isolation. Congress saw it as part of a coordinated effort by the federal government in education. Roman Pucinski, the then chairman of the General Subcommittee on Education of The House Committee on Education and Labor, explains this broader perspective at a hearing on the 1968 admendments held in Chicago.

> I have always looked upon the Elementary and Secondary Education Act which we passed a few years ago as a sort of complimenting what we are doing in this legislation. In ESEA, particularly in Title I, we provide substantial funds for compensatory education, and then we try to give the youngsters a basis on which to proceed. Then we try to pick him up in Vocational Education to carry him through. . . . " (Hearings, p. 452).

An analysis of the 1968 Vocational Education Amendments indicates an important trend which could improve attitudes toward vocational education by minority and low-income groups (Evans et al. 1969). The emerging power and influence of Congressmen from urban centers vis a vis the power of those from rural, agricultural areas (who have traditionally supported vocational education) could result in a program more in tune with the needs and aspirations of inner-city, low-income people. The 1968 legislation directs that vocational programs respond to the reality which minority and low-income people must confront:

> The target group is neither to be passed over by a starting point beyond their reach nor to be trained for second class economic citizenship. The assignment is to take the disadvantaged from where they are to where they should be with preparation which opens for them the full range of economic opportunity. . . . (Evans et al. 1969, p. 88).

The federal government had set its agenda for vocational education for minority and other low-income people. However, though it required matching funds from states for vocational education money, there was no specific requirement that matching funds be allocated by the same formula as the federal money (USOE/DHEW, 1969). This "loophole" has allowed states to fund their entire vocational education program for the disadvantaged from federal money only. For example, in FY 1973, the states of Hawaii, Idaho, and Michigan expended no state or local funds to match the federal money acquired under VEA Part B, Disadvantaged. Twenty-five other states expended less than one dollar of state and local money per federal dollar. Though the overall average is better than two state/local dollars for every federal dollar (nationally,

states spent an average of $2.19 per federal dollar on vocational programs for "disadvantaged students") the state/local expenditures for such programs are much less than that spent on vocational education in general (the average state/local expenditure per federal dollar of VEA Part B was $5.93 in FY1973). Based on these figures, the General Accounting Office concluded that the federal money had not stimulated state or local expenditure for special needs persons (GAO, 1974).

The federal government's active role in vocational education for minorities and low-income people has both positive and negative implications for their perceptions of vocational education. On the positive side, the Congress' and DHEW's strong affirmative stand for vocational education which is responsive to their reality offers the possibility of building a positive conception of vocational education in minority and low-income communities. How well this stand is communicated to these target populations and how well it is translated into programs are two issues which comprise the negative side. The GAO report on expenditures and its further charge that training for all vocational students is not in line with employment opportunities would indicate a negative response to the question of how federal intent is translated into programs (GAO, 1974, p. 69). The ability of Washington to communicate its position(s) on a singular issue is tenuous at best. Most likely, few if any members of these target populations are aware of the federal government's commitment to quality vocational education programs for minority and low income students.

Attitudes of Minority and Low Income Youth: Relevant Research Literature

Research literature with some relevance to the problem at hand includes: (a) Studies of occupational attitudes, aspirations, and satisfactions of minority and low-income persons, (b) studies of job training programs, and (c) observations of vocational and career education programs designed specifically for minority and low-income persons. These are informative in two ways. First, they may provide a statement or comment by an individual or small group which, while it does not represent a comprehensive sampling of the opinions held by target audiences, does indicate one that has been able to surface and must be considered. Second, as with historical description, these sources of information clarify the relationship of vocational education with culturally different or low-socio-economic status people. The explicit or implicit attitudes of vocational educators and vocational education as a system are communicated to their clients and contribute to their attitudes toward vocational education.

Occupational Studies. Studies of attitudes toward work, occupational expectations, and job satisfaction reveal that, in comparable situations, the attitudes and opinions of culturally different people are not significantly different from those of the majority. Keitzell (1970) investigated the attitudes of 500 white and 200 Black workers at eight companies in the northeast United States; he found slightly positive job attitudes for all workers. The job satisfaction for Blacks was slightly higher, but there was a greater concern about promotion and the future among the Black workers. Both the Black and white workers were moderately satisfied with their supervisor.

Lewis's (1969) study of the occupational expectations of high school seniors found similarity between Black and white respondents.

He surveyed 1,264 males in eighty-four segregated and integrated high schools in North Carolina. He found disparate levels of occupational expectations (white students high, Black students low) only when physical integration was not accompanied by high social integration. However, in either segregated or socially integrated settings, the levels of occupational expectations were similar.

Further research shows that many minority and low-income people perceive work as a source of valued rewards (Feldman 1972). As with the majority culture, these rewards are not limited to monetary compensation but include such intangibles as prestige within the family and community, feelings of self-sufficiency, and a sense of making a contribution.

In a study of occupational aspirations and satisfaction of low-income (rural) people, Taylor and Glasgow (1963) found that some respondents were different from the dominant culture. (There was no ethnicity data reported, but the population was probably predominantly white.) Based on this research, Taylor and Glasgow made the following recommendation:

> The analysis in this report suggests two action programs for rural leaders. The first action program [is] for those respondents who accept the culture universals of the the dominant society . . .
>
> For the category of respondents who do not perceive their position as deprived, under-developed, and under-privileged, a double-phase program will be necessary. Action program leaders will find it advantageous to develop, first, a program aimed at modifying the attitudes and values of respondents who exhibit a traditionalistic or subcultural orientation. They should be encouraged to accept the values of the dominant society. Only after such individuals have come to accept the cultural values of the greater society, can programs to provide the means for achievement at the dominant level reach any major degree of success (p. 13).

Thus, while attitudes regarding work and occupational goals held by members of the dominant culture and various non-dominant subcultures are usually shown to be quite similar, where a difference is found to exist, the recommended strategy may be to change the people rather than modify the program to meet their needs. The arrogance evident in such an approach is dysfunctional at best and opens a vocational education or job training program to the charge of institutional racism.

Job Training Studies. The Black participants in the Columbus, Ohio, Concentrated Employment Program (CEP) had positive attitudes toward work. Their attitudes toward CEP were dependent upon the program's ability to provide them jobs that were better than the ones they could get on their own (Lewis et al. 1971).

Wall (1974) reviewed an enormous number of documents on vocational education and job training (e.g., 450 from ERIC) to develop a model delivery system for occupational training for minorities and low-income groups. As a result of this comprehensive study, the recommended recruitment procedures emphasized the need for involving "indigenous personnel," providing incentives such as pay, and using personal follow-up of recent school drop-outs. Though he never explicates the notion, the author implies that his target populations have a negative conception of available programs. His recommendations imply that this negative view is based at least in part on factors other than program quality.

In his review of training programs, Martin (1969) found that participants were keenly aware of:

> public definitions given to the programs for which they were being recruited. Thus, if a program staff or the more general public defined such programs as anti-delinquency programs or as poverty programs, potential trainees seemed to have a tendency to shun them because of the negative connotations associated with such labels. The preferable label seems to be that of work programs. Hardly anyone seemed to resent being associated with this type of project (p. 47).

Bushnell's (1970) study of occupational training packages used in a training program in Philadelphia tested whether revisions in instructional materials would produce the desired learning in project students. This was confirmed in post-test scores comparing experimental and control groups ($p < .05$). However some students involved in the revisions were not content to simply revise the materials presented to them. They took strong exception to what seemingly was a basic strategy of shaping behavioral and attitudinal viewpoints toward "dead-end careers" for Black students. From their perspective, the materials were patronizing since the original authors had such a low estimate of the career potential of the low-income, Black student. The jobs presented were: gas station attendant, bus boy, and clerk. Further, the materials did not deal with the realities of job seeking for the low-income, culturally different youth.

> ". . . the primary question for him is not how to fill out an application, but rather how to convince himself that he has a chance or desire to get a job in the first place." (Bushnell, 1970, pp. 36-38).

The students presented a strong case against those vocational education and training programs which are patronizing or tend to lower the occupational goals of low-income students.

In summary, research on outcomes of job training programs suggests that perceptions of the target audience toward vocational education may be a function of: 1) its effectiveness in producing tangible results; 2) its interpersonal sensitivity; 3) its public image; and 4) its relevance to their occupational goals and needs.

Vocational/Career Education Programs for Minorities. Another source of information for hypothesizing in regard to attitudes toward vocational education among target populations is that of vocational and/or career education programs designed specifically for minorities and low-income students.

It seems reasonable that high quality programs would help develop positive attitudes among the persons served by the programs. While it is beyond the resources of this project to survey and assess all the vocational education programs developed for minority and low-income students, some studies of that nature were identified in our literature search.

A 1968 analysis of secondary vocational programs for these target populations screened over 200 programs and did not identify one truly exemplary program (SERD, 1968). In those instances where "quality programs" were found, they served populations that are both highly homogeneous and very small. Unfortunately, few of these were serving inner-city, hard core unemployed low-income minority youths. Further, this survey found that "cultural bias is prevalent among teachers, in education materials, and is implicit in the operations of the schools" (p. 251).

A nationwide survey conducted by the Massachusetts State Board of Education in 1969 yielded similar results: "No truly exemplary programs for disadvantaged youths" (Massachusetts State Board 1969, p. 55). Young and Associates (1972) found that "non-white persons are still trained for low-skilled occupations" (p. 108). In response to this situation, the authors recommended that:

> . . . before a program can be considered "effectively serving the disadvantaged," it should not only have a substantial proportion enrolled, but those disadvantaged who graduate should find they experience relatively successful entry into the labor force--not just employment, but relatively well paying and/or satisfying employment (p. 110).

It would be useful to ascertain and examine the type of vocational education programs in which minority youths are actually enrolling. However, such data are hard to find. The most recent (1969) indicates that 13.8 percent of all secondary vocational education students were Black, 2.6 percent were American Indian, 3.7 percent were Spanish-surnamed, and 79.5 percent were all other groups (Kay 1970). From these figures, minority youths do not appear to be over-represented in vocational education. However, they are over-represented in some programs and under-represented in others. Minority students comprise 27.6 percent of the trades and industry students and only 13.7 percent of the technical education students. In a society rapidly changing from an industrial to a technological one, the new and expanding occupations are technical, but the programs minority students are taking are industrial. 1965 and 1966 data show that 50-70 percent of persons with special needs in vocational education were enrolled in trades and industry (Hearings 1967). If the vocational education options for minority and low income students are still this limited, one could not be surprised by suspicion and apprehension on the part of these groups toward vocational education.

We can turn also to "position papers" by which prominent educators have tried to reflect the attitudes of minority/low-income populations toward the programs available to them. The dual issues of the political nature of vocational education programs and the consequent cynicism on

the part of some non-white students have been dealt with in a recently published book by Roosevelt Johnson, Black Agenda for Career Education (1974). Johnson states that "the race of the student does make a difference in this country as to what career education is apt to do for students, irrespective of what some white educators are saying." He points to a tendency noted earlier in this report that "most research looks at the deficiencies of the students" as opposed to those of society. Johnson argues that those responsible for vocational education programs for non-white students have not moved far away from the traditional idea that "Blacks are good with their hands, but not with their minds." So entrenched is this idea, according to Johnson, that "when vocational education programs are designed specifically for Blacks, that Blacks should be suspicious of them."

Brazziel, in reference to career education and minorities, is as cautious as Johnson but identifies a specific issue:

> Career education could help Blacks, of course, but there is little in the history of the performance of people who are leading the thrust in career education to suggest that it will. There is an axiom that every Black professional had to make it in spite of his guidance counselor. This is doubly so if he were poor and male, and things were manifestly worse if the counselor were white. Vocational education has long been the receptacle toward which Black talent has been aimed and the National Association of Manufacturers reports that things are so bad in some of these programs that their industrialists would rather have students stay in a good stiff college prep course and come to them at 18 untrained but educated. . . . (Brazziel 1973, p. 1).

Brazziel sees the counseling of young Blacks to enter vocational education as part of the reason Blacks are so under-represented in the

professions. Johnson (1973) echoes Brazziel's concern for professional preparation for minorities, pointing out that this emphasis on vocational training for Blacks was found in colleges as well. In the South, land grant schools established for Blacks were vocational in nature. State legislatures dictated the curriculum (Florida A and M slipped Latin into the curriculum as "agricultural Latin"). Until 1954, only Virginia and North Carolina had publicly supported non-vocational colleges for Blacks. Given this view of vocational education as placing an upper limit on the career development of Blacks, Brazziel and Johnson view career education with a great deal of suspicion.

Alfredo de los Santos has expressed equal concern about the negative implications of career education for Chicanos (De los Santos 1973). He states that the Chicano community has been poorly served by the educational system in general and vocational education in particular. Just as the "cat which has been burned with hot milk will even blow at cottage cheese . . . we in the Chicano community have been so burned by hot milk--the educational system--that we wish to blow on the cottage cheese--career education--before we partake of it" (p. 1).

In a more positive vein, Davenport (1973) has indicated that minority parents do indeed support vocational and career education:

> It is snobbishness which dictates that professional or scholarly pursuits which require a higher academic degree are desirable while the preparation for other careers has no place in our public schools.
>
> The public at large is under no such delusions about the nature of education. Parents, and particularly minority parents, are demanding a system of education which is close to the community and which will give their children the skills they need to take their place in society (p. 4).

Thus, the dichotomy seen in the earlier history of vocational education and minorities (recall the argument between Washington and DuBois) is still unresolved today. Davenport and Petty (1973) acknowledge these historical roots of the argument and state that "members of minority groups tend to view vocation training as inferior to academic education" (p. 1). However, these authors feel that vocational education can help improve the general lack of secondary and college education in the Black community; the income disparity between Blacks and whites ($6,279 to $10,236 in 1970), the concentration of Black males in service, labor, and farm occupations; and an unemployment rate for Blacks that is twice as high as whites. Davenport and Petty are endorsing the fundamental argument underlying vocational education for minorities and low-income people: a strong career/vocational program can reduce the economic and social inequality in this country.

In his Black Man, White World, Cleveland Dennard (1971) lays out very succinctly his suspicions and hopes for vocational education:

> Perennial attacks on public education from the Black community reflect a fantastic height of frustration with educators over their limited ability to link education and training to demands of the employment sector for highly literate, well-trained job applicants. . . . Black Americans want vocational education to be effective in helping them open personnel office doors. They also want to be able to participate in adult vocational extension courses as a part of industry efforts to upgrade personnel. . . . However, general lack of responsiveness from white educators at federal, state, and local levels to the call for new training avenues leaves them open to charges from the Black community of repression, racism, and consorting with the "system" (pp. 53-56).

Summary

The history of vocational education for minority and low-income people highlights a dichotomy that is found in almost all the literature on vocational education and minorities, that between the need to provide Blacks and other ethnic minorities with job skills and the suspicion directed toward vocational programs designed specifically for minorities. The historical data shows this controversy, especially within the Black community, in the earliest history of vocational education. Further, it shows that the critics' suspicions and charges are, at least historically, justified.

VEA (1963) and VEA (1968) are a part of an aggressive federal commitment to education and attack upon poverty and discrimination. However, while the import of ESEA (Title I especially), Job Corps, and other OEO programs in this "war on poverty" are widely known, the relevance of vocational education is probably not well communicated to the target populations.

Data from occupational studies show that, despite the obvious disadvantage that minority and low-income persons have in the labor market, their attitudes toward work, the nature and source of their job satisfaction, and their occupational expectations are similar to middle class or blue-collar workers. Differences occur only when minority students are placed in an extremely disadvantaged position (e.g., in physically integrated but socially segregated schools).

In job training programs, the touchstone for a participant's attitude toward the program is results (help in acquiring a suitable job). Further, these results are attained through a positive interaction with the participants and not through demeaning or condescending approaches.

The current literature on vocational and career education for minorities indicates that the historical dichotomy in minority communities regarding career education still exists. Data showing minorities earning less money, having less salable job skills, and having higher unemployment is used to argue for vocational education. However, our brief review of vocational education for minority and low-income youth indicates that the critics can still call into question the entire notion that vocational education will provide the upward mobility sought by low-income people. Apparently, quality programs for minority and low-income students are still limited. Further, minority students in vocational education are enrolled in programs geared for an industrial economy as our nation moves more and more toward a technological economy.

THE STAGE 2 STUDY

The study described here (Stage 2 study) involved testing the effectiveness of messages targeted to two types of students characterized by different attitudes about vocational education. A Q-sort analysis performed in Stage 1 revealed the two types of students with significantly different attitudes toward vocational education and work. Type 1 students are positive about vocational education and believe that taking vocational education courses leads to better jobs, that the teachers are good, and that the courses are interesting and useful. Type 1 students are encouraged to take vocational education courses by people they respect and admire. Type 2 students are negative about vocational education, believing that the courses are poorly taught, boring or difficult, and that there are too few minority vocational education teachers. They also feel that vocational education courses will not help them get jobs and view vocational education as a hindrance to getting into college. Type 2 students are encouraged to go to college by their parents and people they respect.

The research question asked whether a message designed to move one of the two types of students toward participation in vocational education programs was more effective with those students than messages aimed at the other type. It was determined in Stage 1 of this study that an effective information campaign to involve these students in vocational education programs will require for Type 1 students the provision of information about options and avenues for getting involved; for Type 2 students, there must be information designed to change their attitudes toward vocational education itself.

Procedure

Seven high school teachers allowed us to use their classes for testing during October and November of 1975. The classes included students from Mission and Wilson High Schools in San Francisco, and Lincoln High School in San Jose. These schools were selected from low income areas with a high proportion of minority students. The final sample of 166 students was 88% non-white.

Project staff worked with one classroom at a time. They began by having each student complete an instrument to determine his or her type.* Half of the students of each type were randomly selected to receive each of the two treatments. (Class sizes and the proportions of different student types varied widely, so that numbers in each treatment group are uneven). Figure 1 presents the useable responses obtained for each type-treatment combination. As expected, there were generally fewer Type 2 students available for testing. (In Stage 1 of this study, Type 1 students outnumbered Type 2 students by a margin of 2 to 1.)

Figure 1: Student Type By Message Received

		Student Type	
		Type 1	Type 2
Message Received	Appeal to Type 1	Cell 1 N=62	Cell 3 N=28
	Appeal to Type 2	Cell 2 N=49	Cell 4 N=27

*See Appendix A for instruments used

Once a class had been divided in half, students completed a brief pretest questionnaire and then listened to a speaker deliver the assigned message. Afterwards, they completed a posttest questionnaire and discussed the message with the speaker.

Treatments

The Type 1 and Type 2 appeals were slide tapes with messages developed from what was learned during Stage 1 about the attitudes of each student type. This is reprinted in part below:

> Type 1 students have very positive attitudes toward vocational education. The fact that these students are not enrolled in vocational education courses in any greater proportion than other students suggests a gap in the link between attitude and behavior. Type 1 students already have the predisposition to take vocational education courses. However, the other elements which facilitate the movement from predisposition (attitude) to action are rarely present in schools.
>
> The major reasons Type 1 students are not taking vocational education are lack of knowledge of how to consummate their positive motivation (direction), and the lack of an agency to move them from motivation to action (mechanism).
>
> Type 2 students hold very negative attitudes about vocational education. Convincing these students to take vocational education will be a much more difficult task than for Type 1 students--it is more difficult to achieve behavior change through changing the polarity of attitudes than to change behavior by establishment of facilitating mechanisms for favorable predispositions (McGuire 1969). Here, simply making information about vocational education courses available is likely to have no impact whatever, as these students have a negative predisposition prior to the "message" and are therefore unlikely to voluntarily attend to it.
>
> Source credibility is an important issue with Type 2 students: responses to both vocational education and work statements indicate Type 2 students are less independent than Type 1 students, yielding to pressures

> from parents, teachers, counselors, and peers . . . they have little understanding of what vocational education really is and what it has to offer, seeing it only as a mutually exclusive alternative to college preparatory courses. Due to the centrality of underlying attitudes, these students must be encouraged to act on their own initiative, and not always rely on others to make decisions for them. This is particularly important with regard to their parents, who are applying extreme pressure on their children to go to college at all costs. To facilitate the link between motivation and action, these students need to be convinced that they can try vocational education courses without jeopardizing their chances of getting into college (Webb et al. 1975).

The messages developed were expected to capitalize on this information. In the case of Type 1 students, it was felt that the message should provide information and motivation regarding opportunities in vocational education and inform the student of the procedures necessary to enroll in vocational education courses. The message should be primarily informational, stressing delivery aspects of vocational education programs. For Type 2 students, the message should describe how vocational education classes can help them achieve their occupational objectives, either as an alternative to college or as an enrichment of their college preparatory program. The message should be primarily persuasive, stressing the employment opportunities available to students in vocational education programs.

Prototype messages were developed and pretested using two classes of San Francisco high school students. It was determined that the intended points of each message were, in fact, the ones communicated. Appendix B presents a complete transcript of the two slide tapes.

Instruments

Students completed three instruments: an initial 10-item battery to indicate his or her type, a Before-Measure or pretest questionnaire, and an After-Measure or posttest questionnaire. The first is a

shortened paper-and-pencil version of the Q-sort used to study attitudes in Stage 1. This 10-item battery is an adaptation of the Q-blocking technique (Stephenson 1953). The 10 items were chosen from 48 Stage 1 vocational education statements to achieve two objectives: 1) maximally separate Type 1 and Type 2 students (i.e. the pattern of response to each of these statements in the original sample was maximally different for the two types of students); and 2) to span the R-factors derived in the initial stage (i.e. each of the 10 statements is representative of a different type of attitude about vocational eudcation). This instrument is presented in Appendix A, page 1 of Form A.

The pretest (Form A) recorded information concerning how subjects felt about vocational education prior to receiving the message. In addition, it was used to collect demographic and other data to provide a fuller understanding of the attitudes and habits of the two types of students. It was hoped that evidence would emerge suggesting a means of targeting information differentially to the two types of students. Such a means of selective reach was not found in Stage 1 of this study.

The posttest (Form B) measured impact of the treatments. This included a measure of opinion regarding the worth of taking vocational education, two measures of intent to participate in vocational education, and a measure of change in interest in vocational education after hearing the message. These measures are presented in Figure 2. Complete items are included in Appendix A, on both Forms A and B.

Figure 2

Before-After Items	After-Only Items
From what you know about vocational education, would you say it is a good thing for students to get into?	Are you planning to enter a vocational education program, either now or after high school?
What do you expect to be doing for most of the first few years after you leave high school?	After hearing this presentation, are you more interested in taking vocational education than you were before?

Sample

Subjects were students from San Francisco and San Jose high schools. Table 1 presents a breakdown by various factors and compares them on ethnic origin with the profile for the six Bay Area counties originally studied in Stage 1.

Table 1: Percentages of Student Samples From Each Sex, Grade, And Ethnic Classification

		(Stage 2) Current Sample	Stage 1 Sample
Sex	Male	43%	55%
	Female	57	45
Grade	9th	2	13
	10th	67	19
	11th	26	41
	12th	5	27
Ethnic Origin	Asian	17	5
	Black	39	26
	White	12	31
	Chicano	16	26
	Other (Mostly Filipino)	16	12
		N=166	N=356

The proportions for the two samples are quite different, but both reflect one of the sampling objectives, to overrepresent non-white populations.

RESULTS

Of specific interest in this study was the comparative effectiveness of the targeted messages with the two types of students. With reference to the following four-fold table, it was expected that subjects in cells 1 and 4 would be more likely than subjects in cells 2 and 3 to respond favorably; thus, relative to cells 2 and 3, messages would show most effect in cells 1 and 4.

Table 2: Student Type By Message Received

Message Received	Student Type: Type 1	Student Type: Type 2
Appeal to Type 1	Cell 1	Cell 3
Appeal to Type 2	Cell 2	Cell 4

The effect of each message was measured in four ways: positive change in attitude about the worth of vocational education; increased interest in taking vocational education courses; intent to take vocational education courses; and a change in after-high school plans to include vocational education. These items are repeated in Figure 3 and in Appendix A.

Figure 3: Items Measuring Treatment Effects

1. After hearing this presentation, are you more interested in taking vocational education than you were before?

   ___ Yes, I am much more interested

   ___ Yes, I am a bit more interested

   ___ No, I feel about the same

   ___ No, I am less interested

2. Is vocational education a good deal for students? (Check one answer)

   ___ Extremely good

   ___ Very good

   ___ Moderately good

   ___ Slightly good

   ___ Not at all good

3. Are you planning to enter a vocational education program, either now or after high school?

   ___ Yes (What job will you train for?_____)

   ___ Maybe

   ___ No (Why not?_____)

4. What do you expect to be doing for most of the first few years after you leave high school? (Check as many as fit)

   ____ Going to a 4 year college or university

   ____ Going to a junior college

   ____ Going to a vocational or technical school

   ____ Going into the armed forces

   ____ Working at a steady job (What job?_____)

   ____ Getting married and setting up a home

   ____ Traveling around

   ____ Nothing much while I figure out what I'd really like to do

Thus, we looked for changes in attitude, interest, and intent to try, each a progressively advanced step in the innovation-adoption process.

Since treatments used were intended only as rough prototypes, they were expected to have only limited impact. Thus, the concern here was more with the numbers of subjects who indicated some movement as a result of the appeals rather than with a statistically significant change based on the degree or size of movement. For this reason, results are presented in terms of frequencies rather than mean scores for each cell. We wanted to see if any of the subjects in a particular cell showed any change at all. Tables 3 through 6 present percentages of subjects who indicated the response looked for on each measure.

Looking across the four measures, we can observe three types of effects. As expected, there was a contaminating effect due to the classification of students as Type 1 or Type 2. For all four measures, fewer Type 2 students responded favorably to the treatments, further supporting the contention that Type 2 students are more resistant to change than Type 1 students. This effect was greatest for intent, with the types being more similarly inclined on attitude and interest. On intent, Type 1 students comprised most of those who decided after the message to enter a vocational education program.

A second contaminating effect was due to appeal: the Type 2 appeal mediated more changes in attitude and after high school intent; the Type 1 message mediated more changes in interest.

The third effect due to the treatments was the hypothesized interaction--that more Type 1 students given the Type 1 message and Type 2 students given the Type 2 message would change relative to Type 1 students given the Type 2 message and Type 2 students given the Type 1 message. In fact, more students

Table 3: Percent Of Subjects Indicating Increased Estimate Of Worth Of Vocational Education (Attitude).

Appeal	Subject Type: Type 1	Subject Type: Type 2	
Type 1	28% (N=62)	23% (N=28)	26%
Type 2	36% (N=49)	28% (N=27)	33%
	32%	25%	

Table 4: Percent Of Subjects Indicating The Message Had Increased Their Interest in Vocational Education.

Appeal	Subject Type: Type 1	Subject Type: Type 2	
Type 1	83% (N=62)	79% (N=28)	81%
Type 2	74% (N=49)	69% (N=27)	72%
	78%	75%	

Table 5: Percent Of Subjects Indicating They Intend Definitely To Take Vocational Education Courses.

Appeal	Subject Type: Type 1	Subject Type: Type 2	
Type 1	18% (N=62)	7% (N=28)	14%
Type 2	16% (N=49)	7% (N=27)	13%
	17%	7%	

Table 6: Plans After High School (Percent Indicating Change In Plans To Include Vocational Education.)

Appeal	Subject Type: Type 1	Subject Type: Type 2	
Type 1	18% (N=62)	0% (N=28)	12%
Type 2	22% (N=49)	11% (N=27)	18%
	20%	5%	

changing in the hypothesized direction was found for the intent measures but not for attitude and interest.

Summarized another way, on the attitude measure, more Type 1 students changed, but the Type 2 message had most effect with both types of students. On the interest measure, slightly more Type 1 students changed and the Type 1 message was more effective. On intent to take vocational education in school, more Type 1 students changed, but there is also a slight interaction, such that the Type 1 message changed more Type 1 subjects and the Type 2 message changed relatively more Type 2 subjects (taking into account the weaker effect of the Type 2 message).

Finally, on the measure concerning plans after high school, while more Type 1 subjects changed, the Type 2 message mediated more changes, and, taking into account these contaminating effects, there was a slight tendency for the Type 1 message to change more Type 1 subjects and the Type 2 message to change (relatively) more Type 2 subjects.

As mentioned earlier, there appear to be more Type 1 subjects in the area from which we drew our sample. It was also the case that the Type 1 subjects had more extreme scores on the 10-item typing battery. That is, they usually responded appropriately for all or all but one of the items. Type 2 subjects were less "pure"; on the 10-item battery, they usually gave Type 1 responses to at least two of the items. In fact, since there were very few "pure" Type 2 students, "borderline" cases were classified as Type 2. In light of this, we considered whether this could have confused results. We separated out the purest subjects of each type to see if they reacted more in line with our predictions. Table 7 shows the results.

Table 7: Percentages Of "Pure" Subjects Responding As Indicated On the Four Measures.

Attitude

Appeal \ Subjects	Type 1	Type 2	
Type 1	33% (N=18)	0% (N=9)	22%
Type 2	10% (N=11)	0% (N=5)	7%
	25%	0%	

Interest

Appeal \ Subjects	Type 1	Type 2	
Type 1	89% (N=18)	78% (N=9)	85%
Type 2	91% (N=11)	40% (N=5)	75%
	90%	64%	

Intent in School

Appeal \ Subjects	Type 1	Type 2	
Type 1	6% (N=18)	22% (N=9)	11%
Type 2	18% (N=11)	0% (N=5)	12%
	11%	14%	

Intent After School

Appeal \ Subjects	Type 1	Type 2	
Type 1	64% (N=18)	22% (N=9)	50%
Type 2	25% (N=11)	0% (N=5)	17%
	49%	14%	

Unfortunately, numbers of "pure" subjects are too small for any real conclusions. However, as regards the hypothesized interaction, using only the pure students strengthens the results for the attitude measure and the plans-after-high school measure; it weakens the result regarding intent to take vocational education courses.

Other Findings: Vocational Decision-Making

We also asked these students where they get information relevant to making vocational choices, the kinds of vocational expectations they have, and what specifically they see as wrong with the vocational education offerings available to them.

Information Sources. In the report of Stage 1 results, the problem of "Selective Reach" was discussed, i.e., if we want to aim messages at particular groups of students, it is useful to have knowledge of their information habits. Some of our questions were aimed at getting this information.

Students were asked to indicate up to three sources in response to the question, "Where do you get most of your ideas about jobs that might interest you after you finish school?" Table 8 presents the results.

These students get most of their information on vocational options from talking with friends and family (see "other" category); then from class, and finally, from reading newspapers and magazines. Type 1 students are somewhat more likely to get their ideas in the school setting (counselor, classroom), Type 2 students to get theirs from the mass media or their own job experience. This is consistent with what we've learned about the choices each type is likely to make, with Type 2 students possibly being more influenced by glamour aspects of a job, i.e., how it looks to others.

Table 8: Percent of Subjects Indicating For Each of Ten Specific Sources That It Is Among His Top Three For Information Relevant To Vocational Choice.

Information Choice	Percent of Total Sample (N=166)	Percent of Type 1 Students (N=111)	Percent of Type 2 Students (N=55)
From talking informally with other people	61%	62%	60%
From what I learn in class	45%	49%	38%
From reading newspapers and magazines	36%	33%	40%
From meetings with the school counselor	19%	22%	15%
From TV	18%	15%	24%
From my job experience	17%	12%	29%
From participating in extra-curricular activities	13%	12%	16%
From reading books that are assigned	7%	7%	5%
From listening to the radio	5%	5%	5%
From reading books on my own	1%	.9%	2%
Other ("family"; or "thinking")	37%	37%	36%

Subjects were also asked what persons they found most helpful. Table 9 presents these results.

Table 9: Percent of Students Checking Each Response to "What Persons Do You Ask. . . ?"

	All (N=166)	Type 1 (N=111)	Type 2 (N=55)
Parents	77%	75%	80%
Older friends	48%	45%	55%
Counselors	31%	31%	33%
Friends my age	23%	23%	25%
Teachers	19%	14%	31%

Relatively more Type 2 subjects use all of these personal sources, particularly teachers and older friends. This is consistent with what we know about Type 2 students, i.e., they are more influenced by what others think. Parents are easily the most frequently used, followed by older friends. Teachers and peers are less sought out.

Vocational Expectations. Students were asked before and after the treatments what they expected to do for the first few years after leaving high school. They were also asked if this was what they most wanted to do, and similarly if others felt they should do this. Tables 10 and 11 present the frequencies for these items.

These results are not too informative, since subjects could check three responses as their vocational expectation and it is thus not clear which is the predominant choice. But there is an indication that the treatments increased the numbers of students thinking about job/vocational

Table 10: Percent Of Students (N=166) Checking Options For "What Do You Expect To Do After High School?" (Students Could Indicate Three Responses.)

Option	Percent Checking Option Before Treatment	Percent Checking After Treatment
Going to a 4-year college or university, or junior college	79%	74%
Getting married and setting up a home, traveling around, or nothing	40%	31%
Going into the armed forces, or working at a steady job	35%	39%
Going to a vocational or technical school	16%	26%

Table 11: Percent of Students (N=166) Indicating That What They Expect To Do Is What They And Others Want.

	Before Treatment		After Treatment	
Is this what you want to do?	78%	Yes	78%	Yes
	22%	No or No response	22%	No or No response
Do others want you to do this?	80%	Yes	74%	Yes
	20%	No or No response	26%	No or No response

options. In general, students wanted to do what they expected to do, and they felt others wanted this for them as well.

Problems With Available Programs. Subjects were asked to check what they felt were problems with the vocational programs available to them. Table 12 presents the results.

Table 12: Percent of Students Checking Each Of Twelve Problems With Available Vocational Education Programs

Item Checked	Total Sample (N=166)	Type 1 Students (N=111)	Type 2 Students (N=55)
There aren't enough courses to choose from.	45%	44%	47%
They don't offer enough work experience.	44%	37%	58%
Other people have negative attitudes about them.	44%	37%	58%
Counselors aren't any help in getting into these programs.	30%	31%	27%
They don't train students well enough to go out and get jobs.	28%	26%	31%
Classes are too large.	28%	21%	49%
The courses are boring.	27%	20%	40%
The jobs they teach are undesirable jobs.	16%	14%	18%
They don't teach useful skills.	14%	11%	20%
The content is out of date.	13%	13%	15%
The teachers are not good teachers.	11%	11%	13%
They train students for jobs that aren't there.	0%	.9%	0%
None of these is a problem	17%	23%	5%

Immediately apparent is the greater tendency on the part of Type 2 subjects to feel there are problems with vocational education. If we look at results for the "pure" subjects, this difference is underscored. Table 13 presents these results.

Table 13: Percent of Pure Types Indicating Each Of Twelve Problems With Available Vocational Education Programs

Item Checked	Pure Type 1 (N=29)	Pure Type 2 (N=14)
There aren't enough courses to choose from.	38%	36%
They don't offer enough work experience.	28%	71%
Other people have negative attitudes about them.	41%	79%
Counselors aren't any help in getting into these programs.	31%	14%
They don't train students well enough to go out and get jobs.	14%	36%
Classes are too large.	24%	50%
The courses are boring.	7%	50%
The jobs they teach are undesirable jobs.	7%	21%
They don't teach useful skills.	3%	29%
The content is out of date.	10%	7%
The teachers are not good teachers.	7%	14%
They train students for jobs that aren't there.	14%	21%
None of these is a problem	34%	0%

Those who checked problems were most concerned with the negative attitudes of others, the lack of courses to choose from, and the lack of work experience offered.

We checked to see if students who had taken vocational education courses responded differently from those who hadn't.

Table 14: Percent of Students Who Had Taken Vocational Education Courses And Of Those Who Had Not Checking Each Problem

Problem Checked	Taken More than 1 (N=53)	Taken 1 (N=50)	Taken None (N=60)
There aren't enough courses to choose from.	51%	48%	37%
They don't offer enough work experience.	45	56	33
Other people have negative attitudes about them.	47	38	47
Counselors aren't any help in getting into these programs.	26	36	28
They don't train students well enough to go out and get jobs.	34	26	23
Classes are too large.	38	20	25
The courses are boring.	30	22	28
The jobs they teach are undesirable jobs.	15	14	18
They don't teach useful skills.	9	26	8
The content is out of date.	19	12	7
The teachers are not good teachers.	13	10	12
They train students for jobs that aren't there.	17	16	13
None of these is a problem.	15	18	18

More students who'd taken vocational education were critical of effectiveness aspects, how well the courses prepared them to get jobs (i.e., they don't train well enough to get jobs, they don't teach useful skills, they train students for jobs that aren't there, there aren't enough courses to choose from, the content is outdated, and they don't provide enough work experience.) We also checked whether minority students pinpointed different problems.

Table 15: Percent of Each Ethnic Group Checking The Problems Listed

Problem Checked	Black (N=65)	Chicano (N=27)	Asian (N=28)	Other Non-white (N=25)	White (N=20)
There aren't enough courses to choose from.	49%	56%	39%	32%	45%
They don't offer enough work experience.	51	48	39	20	55
Other people have negative attitudes about them.	38	41	54	48	50
Counselors aren't any help in getting into these programs.	34	26	18	40	25
They don't train students well enough to go out and get jobs.	35	26	14	24	30
Classes are too large	29	33	32	16	25
The courses are boring.	32	30	21	12	30
The jobs they teach are undesirable jobs.	22	15	7	12	15
They don't teach useful skills.	18	11	7	12	15
The content is out of date.	14	19	11	4	20
The teachers are not good teachers.	11	11	7	20	10
They train students for jobs that aren't there.	25	15	4	8	15
None of these is a problem.	12	19	18	36	5

The biggest difference is in the responses of Black and Asian students, with the Blacks being more often concerned with aspects of course content and the Asians more concerned with negative attitudes of others.

Specifically, the highest numbers of Black students were concerned with lack of work experience and course variety. Most Asian students were concerned with the negative attitudes of others; they indicated less concern with the course content. As with the Black students, most Chicano students were concerned with course variety and work experience; like the Asians, they were also concerned with others' attitudes toward vocational education. Like the Asian students, whites were concerned with negative attitudes of others; like the Black and Chicano students, they were also concerned with the lack of work experience and course variety.

DISCUSSION

The results of the Stage 2 study indicate again the existence of the two types of students described in Stage 1: Type 1 students from the Stage 1 sample have positive attitudes toward vocational education but lack involvement in vocational education programs; Type 2 students from the Stage 1 sample have negative attitudes toward vocational education. The Type 1 students feel that vocational education leads to better jobs, that employers welcome job applicants who have taken vocational education, and that vocational education courses can fulfill their needs in school. Relative to the Type 1 students, Type 2 students think vocational education courses are boring, do not offer enough work experience, do not lead to better jobs, and cannot fulfill their needs in school. A high percentage of the Type 2 students feel pressure from their parents to go to college--two thirds plan to attend a four year college or university. This pressure is much less evident for the Type 1 students, and less than half plan to attend a four year college.

Treatments targeted to the two types of students produced logical but in some cases unanticipated results. The post-test questionnaire contained four measures of treatment impact: a measure of improved attitude toward vocational education as a result of listening to the messages, a measure of interest in vocational education courses, and two measures of intention to participate in vocational education programs.

We found that Type 1 students changed more on all measures, regardless of the treatment. The hypothesized interaction was observed only very slightly and only for the measures of intent. Looking at "pure" students of each type gives the interaction for attitude and intent-after-school.

While results are confusing, it appears that the messages may operate as predicted if we are concerned with more general commitments (after-high school intent), but with the more immediate commitment (intent to take vocational education courses now) results are independent of treatments. Somewhere in between is the more general interest measure, which shows the predicted effect but is unstable, and the attitude measure, which shows the effect for pure subjects.

A certain logic can be applied. It was not expected that either message would show much impact, since both were prototypical and not solidly backed up by the reality of available offerings. It may be that students felt persuaded in theory, but they were not inpelled to take immediate action. In fact, group discussions always brought up the same points: students were stimulated by the information about vocational alternatives, but they didn't feel that programs leading to these alternatives were really immediately available to them. Thus, the staff observer concluded from listening to student discussions:

> Students felt that after hearing the speakers at Far West Laboratory, they would like to explore further vocational education training or trade schools as an alternative to going to college right after high school; but students agree there are not enough vocational education courses or vocational education programs and both need clarification as to how useful these courses are in seeking employment.

We concluded that the two types of students found by this study do represent important population segments, but that to reach either segment to increase participation in existing programs, one has to start with improved and believable access to programs that lead to jobs. Thus, before any large-scale attempt is made to "advertise" vocational education programs by the methods described in this or any other study, another more important

notion must be addressed. That is, it does no good to advertise quality programs when they are not easily available. In fact, it can do much harm because if a lower-quality product is tried and found wanting (when tested against the inflated promise), the probability of a second trial is greatly reduced, even if the product is improved.

There is every indication from this study and from other studies discussed earlier in this report that there exists a mismatch between availability and quality of current vocational education offerings and the wants and needs of minority and disadvantaged students. From this study, strong evidence in support of this claim comes from a question concerning what students feel to be the main problems with vocational education courses and programs. Those students in the sample who had taken vocational education courses before checked more problems with them than those who had not (an average of 3.35 v. 2.8). In addition, those students who had taken more than one vocational education course listed more problems with vocational education than those who had taken only one course (3.45 v. 3.24).

As was pointed out in the introduction to this report, the usual response to this type of dissatisfaction has been to ascribe the deficiencies to the students rather than to the programs. The concern is generally with fitting the students to the programs rather than fitting the programs to the students. In most instances, this approach has failed, and the dissatisfaction still persists. Here, a marketing orientation can be useful. In today's competitive markets, success depends on developing products and services that respond to rather than prescribe consumers' wants and needs.

Where program offerings justify promotional efforts aimed at each type of student, there are indications that they may use different information sources for learning of them. While the only significant demographic

difference between the two types is again sex (a higher percentage of Type 1 students are females, consistent with Stage 1 findings), a question about information-seeking behavior revealed slight differences. Both types prefer personal contacts for information about job opportunities. However, Type 2 students are more receptive to mass media (especially television and newspapers) for employment ideas. This suggests the possible usage of these media to direct vocational education information to the Type 2 students. In addition, more Type 2 than Type 1 students find teachers useful in helping them to plan their futures. It appears that teachers could be an effective source for communicating the potential benefits of vocational education courses to Type 2 students.

Implications for Future Research

Further study of suggestions regarding communication with the two types should avoid the methodological limitations which probably explain some of the failure of the present study to produce stronger support for the major hypothesis. A more elaborate experimental design would have been desirable if practical problems associated with it could have been overcome. Such a design would have divided respondents into eight groups instead of four--with half of the groups receiving no pretest.* Unfortunately, this was impossible for this study, due to an inability to recruit students who had participated in Stage 1 (essential for identification as Type 1 or Type 2 students if no pretest is used). In addition, it would have been desirable to have control groups receiving just the measurement instruments, to isolate biases due to the interaction between the treatments and the post-test measures.

*This is a modification of the Solomon 4-group design (Campbell & Stanley 1963)

This was not done here because it would have required additional students for whom there would be no built-in "pay-off" in the form of information about vocational education programs.

With respect to the design itself, it would have been desirable to separate the pre-test measures from the rest of the experiment by a time interval long enough to prevent subjects from remembering their answers to questions appearing on both pre- and post-test questionnaires. Temporal proximity of pre- and post-test measures can diminish the apparent effects of experimental treatments to the extent that subjects remember pre-test answers and wish to be consistent when responding to the same questions on a post-test questionnaire . For the present study, this separation could not be achieved without bringing participants to the Far West Laboratory twice, or going into classes at their schools at least once, neither of which were feasible.

Another problem which may have contributed to the lack of strong results was the apparent "impurity" of the Type 2 students participating in the study. The Q-block instrument used to distinguish Type 1 and Type 2 students revealed a majority of participants to be either strongly Type 1, or somewhere between Type 1 and Type 2. Either the Q-block instrument was unable to successfully discriminate Type 1 and Type 2 students to the same degree as the full Q-sort procedure used in Stage 1; or the participants were in fact either strongly Type 1 in their attitudes, or somewhere between Type 1 and Type 2. There is evidence to support the latter explanation. For balancing purposes for the present study, the latter were designated Type 2's in all instances. A larger sample is needed for obtaining a greater representation of "pure" Type 2's.

Until access to effective programs is improved, it would be unwise to implement on a broad scale any of the communication strategies put forth in this report. The first logical step is to focus on the programs themselves, paying particular attention to any deficiencies with respect to the needs and capabilities of the student groups they seek to satisfy. In particular, it appears that a wider variety of courses and programs with work experience are desired. Further research can identify the variety desired. Our examination of studies of programs available to and used by low income minority youth suggests that this would include programs for jobs which are meaningful in this technological (as opposed to industrial) age.

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APPENDIX A:

INSTRUMENTS

FORM A

Name_____ School_____

For each of the following statements, check "agree" if you basically agree with what the statement says. Otherwise, check "disagree".

Check an answer for all 10 statements--even if you do not feel strongly one way or another. If you're not sure, think about whether you probably would agree more or disagree more, and check that answer.

	Agree	Not Sure-Probably Agree	Not Sure-Probably Disagree	Disagree
Vocational education courses are boring.				
Employers welcome job applicants who have taken vocational education.				
Vocational education courses can fulfill my needs in school.				
One good thing about vocational education is that you're sure of getting some kind of job when you graduate.				
There are not enough students taking vocational education.				
A lot of teachers don't think much of vocational education courses.				
My parents think I should go to college instead of taking vocational education.				
Vocational education doesn't help certain students because employers don't want to hire them anyway.				
I could get a better job if I took more vocational education.				
Employers want college graduates, not high school students with vocational education backgrounds.				

1. Are you male_____? or female_____?

2. What grade are you in? 9_____ 10_____ 11_____ 12_____

3. What is your Race? Asian____ Black____ White____

American Indian_____ Chicano_____ Other____ (what?)_____

4. Have you ever taken a vocational education course?

Yes, One _____

Yes, more than one _____

No _____

5. What do you feel are the main problems with the vocational education courses or programs you know about or have heard about? Check as many as fit.

_____ The jobs they teach are undesirable jobs.

_____ They don't teach useful skills.

_____ Other people have negative attitudes about them.

_____ The courses are boring.

_____ They don't train students well enough to go out and get jobs.

_____ There aren't enough courses to choose from.

_____ The teachers are not good teachers.

_____ The content is out of date.

_____ Counselors aren't any help in getting into these programs.

_____ Classes are too large.

_____ They don't offer enough work experience.

_____ They train students for jobs that aren't there.

_____ None of the above.

6. From what you know about vocational education, would you say it is a good thing for students to get into?

_____ Yes, extremely good

_____ Very good

_____ Moderately good

_____ Slightly good

_____ Not at all good

7. What do you expect to be doing for most of the first few years after you leave high school? (Check as many as fit)

_____ Going to a 4 year college or university

_____ Going to a junior college

_____ Going to a vocational or technical school

_____ Going into the armed forces

_____ Working at a steady job (What job?_____)

_____ Getting married and setting up a home

_____ Traveling around

_____ Nothing much while I figure out what I'd really like to do

8. Is this what you most want to do? Yes ____ No ____

9. In general, do others (such as your parents, teachers and friends) think you should do this?

Yes ____ No ____

10. When you need advice or help in planning for your future, which of these people do you find most helpful? (You may check more than one answer)

_____Teachers

_____Counselors

_____Parents

_____Friends my age

_____Friends older than me

11. Do you usually follow their advice? _____ yes, always

_____ yes, most of the time

_____ no, never

12. Where do you get most of your ideas about jobs that might interest you after you finish school? (Check the three best answers)

____ from talking informally with other people

____ from reading newspapers and magazines

____ from TV

____ from listening to the radio

____ from meetings with the school counselor

____ from what I learn in class

____ from participating in extracurricular activities

____ from reading books that are assigned

____ from reading books on my own

____ from my job experience

____ other (specify:_____)

13. If your parents disagreed with your decision about what to do after high school, would you try to change to be more in line with their wishes?

_____Definitely Yes, I'd try to change

_____Probably yes

_____Probably no

_____Definitely No, I wouldn't try to change

14. Indicate how much you agree with the statements listed below. (Check an answer for each statement)

	Agree Strongly	Agree Somewhat	Disagree Somewhat	Disagree Strongly
Good luck is more important than hard work for success.				
A person who works hard can succeed even if others are against him.				
The luckiest people are the ones who can succeed without a lot of hard work.				
If a person is not successful in life, it is his own fault.				
Often when I try to get ahead, something or somebody stops me.				

15. What is your father's (or guardian's) work or job most of the time? (Give the name of his job or occupation--like carpenter, salesman in a store, owns a grocery store, doctor, lawyer, plumber, etc.)

_____

Does your mother (or guardian) have a job outside the home?

_____No

_____Yes (What is it?_____)

FORM B

Name_____ School_____

1. After hearing this presentation, are you more interested in taking vocational education than you were before?

___ Yes, I am much more interested

___ Yes, I am a bit more interested

___ No, I feel about the same

___ No, I am less interested

2. Is vocational education a good deal for students? (Check one answer)

___ Extremely good

___ Very good

___ Moderately good

___ Slightly good

___ Not at all good

3. Are you planning to enter a vocational education program, either now or after high school?

___ Yes (What job will you train for?_____)

___ Maybe

___ No (Why not?_____)

4. What do you expect to be doing for most of the first few years after you leave high school? (Check as many as fit)

_____ Going to a 4 year college or university

_____ Going to a junior college

_____ Going to a vocational or technical school

_____ Going into the armed forces

_____ Working at a steady job (What job?_____)

_____ Getting married and setting up a home

_____ Traveling around

_____ Nothing much while I figure out what I'd really like to do

APPENDIX B:

MESSAGES

Picture	Sound
1.	1. As most of you know it isn't exactly the easiest thing in the world to find a job today--especially a good one. But did you know that there are over a million available jobs that can't be filled,
2.	2. simply because there aren't enough workers with the right skills? These jobs include,
3.	3. computer operators,
4.	4. road construction,
5.	5. printers,
6.	6. mechanics,
7.	7. horticulturists,
8.	8. draftspersons, and
9.	9. machinists, just to name a few. Job training just hasn't kept pace with the changing needs of society.
10.	10. Vocational education trains students in skills that can actually be used on the job.
11.	11. You can start taking vocational education courses in your own high school. Most schools offer courses in
12.	12. accounting,
13.	13. food preparation,
14.	14. business management,
15.	15. printing,
16.	16. graphic arts,
17.	17. communications,
18.	18. grocery checking and
19.	19. medical fields.

(continued)

Picture	Sound
20.	20. These courses can be taken as electives, or as part of a complete vocational program which takes the place of your regular high school curriculum.
21.	21. Your counselor can help you decide which courses to take. You enroll in vocational education courses the same way you do in any high school course--just check the course you want on your registration schedule at the beginning of each term. If you plan to get a job after high school graduation, it usually pays to take vocational education.
22.	22. Mr. Jack DeAngelo, head of the Career Center at Mission High School in San Francisco, says that the more vocational education courses a student takes during high school, the easier it is to find that student a job.
23.	23. Your school's placement office is aware of both full and part-time openings. Brochures describing various occupations are available in your counselor's office.
24.	24. After high school you can take advanced vocational training at either a community college or a vocational school. Over 300 specific programs are available throughout California. These programs include,
25.	25. drafting,
26.	26. hotel management,
27.	27. chef training,
28.	28. secretarial sciences,
29.	29. legal assistance programs,
30.	30. police science,
31.	31. forestry,
32.	32. Heavy equipment operation,
33.	33. optics,
34.	34. security patrol,

(continued_

Picture	Sound
35.	35. building and construction, and
36.	36. aircraft flight training (and let's not forget to get rid of the old stereotypes of who can do what--
37.	37. any of these jobs are open to women as well as men). These are just a few of the programs from which you can choose.
38.	38. Not all schools provide training in each of these fields, but if you check around you can usually find at least one school near you that offers what you're looking for.
39.	39. The vocational programs at community colleges take about 2 years to complete. You are then awarded an Associate of Arts degree or a similar certificate.
40.	40. In some cases it's possible to combine your academic training with on-the-job experience by enrolling in Cooperative Education programs.
41.	41. You have a number of alternatives in planning your future. You can wait until after graduation to decide what to do, but you might run into some problems and end up with a job that isn't satisfying or no job at all.
42.	42. Or you can start taking courses now that will help you get the job you want. Vocational education gives you the chance to get the kind of training you need for the career you want.
43.	43. Your counselor or the career center at your high school can give you more information about vocational education courses at your school and help you plan your future.

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TREATMENT II MESSAGE

Picture	Sound
1.	1. Our society is highly technical today and changing at such a rapid pace that it is difficult for most of us to stay ahead of the changes.
2.	2. The world of work is one area that is constantly on the move, the whole trend is shifting.
3.	3. People are by-passing jobs once considered prestigious for jobs they enjoy doing. Do you realize that right now, there are about a million jobs, nation-wide, that can't be filled simply because there aren't enough trained technicians? In addition, it is estimated that by 1985 only 25% of all jobs will require a college education.
4.	4. A recently published magazine article about some of the available jobs include
5.	5. machinists,
6.	6. salesmen,
7.	7. computer repairers,
8.	8. and draftsmen.
9.	9. The point the article makes is that in a technological society, technicians are needed to keep the machines going.
10.	10. Where, you may ask, can I go to obtain skills that will qualify me for these jobs?
11.	11. One answer is "vocational education." High schools, community colleges and other institutions are now providing this type of training.
12.	12. Vocational education courses can help you keep up with the rapid changes by aiding you in selecting a career choice that will be beneficial to you in the future.
13.	13. Once training is completed (apprenticeships are necessary in some cases), you may obtain employment in a field that offers a good salary. For example,

(continued)

Picture	Sound
14.	14. a bus driver in the Oakland-San Francisco Bay Area, after a twenty five-day training period, earns approximately $13,500 annually.
15.	15. Vocational education is offered in almost any field you wish to choose from. Some examples are:
16.	16. computer science,
17.	17. building and construction,
18.	18. hotel management,
19.	19. food processing,
20.	20. business and management,
21.	21. secretarial sciences,
22.	22. legal assistance programs,
23.	23. police science (and let's not forget to get rid of the old stereotypes of who can do what--
24.	24. any of these jobs are open to men and women). Vocational training also includes
25.	25. optics,
26.	26. auto repair,
27.	27. heavy equipment repair,
28.	28. boat and ship building and
29.	29. marine technology. These are just some of the programs from which you can choose.
30.	30. There are well over 300 specific programs available at vocational schools throughout California.
31.	31. Your high school has related or cluster courses covering a wide range of the courses mentioned.

(continued)

Picture	Sound
32.	32. After high school you can take advanced training in either community colleges or vocational schools.
33.	33. Most community colleges offer an Associate of Arts Degree or a certificate in vocational education programs.
34.	34. The cost of a college education today is extremely high. Quoting an August 27, 1975 editorial from the Oakland Tribune, "Michigan University study finds that
35.	35. the average American family that wishes to send its children to a public college will have to spend one third of its income to do so. In plain numbers this means that the family making
36.	36. $13,000 a year will have to spend $4,000 a year to send its children through a four-year public college." We do not imply that vocational education is a substitute for college.
37.	37. However, vocational education programs can prepare you to earn the necessary funds to continue a college education. Some programs can be used as credit for the first two years of a four-year college degree program.
38.	38. Also, community colleges offer cooperative education courses which allow you to combine academic training with
39.	39. practical on-the-job training as part of your degree or certificate program.
40.	40. Job placement services are also available for vocational students. The job placement office has a variety of available jobs, both full and part time.
41.	41. There are also work experience coordinator/ counselors available to give students career guidance or help with special problems.
42.	42. There will be a lot of changes in the future, so it is important to develop your skills now in preparation for the future.

(continued)

Picture	Sound
43.	43. Advice from others can be helpful when planning your career, but the final decision is up to you, because you are the one who's going to be doing the work.
44.	44. You have a number of alternatives concerning your future role in society. You can do nothing and not worry about qualifying yourself for anything and learn your skills hit or miss.
45.	45. But there are problems with this, and you might end up with a job that isn't satisfying, or no job at all. The rewards are great if you have the right job.
46.	46. Vocational education gives you the chance to get the kind of training you need for the career you want.

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